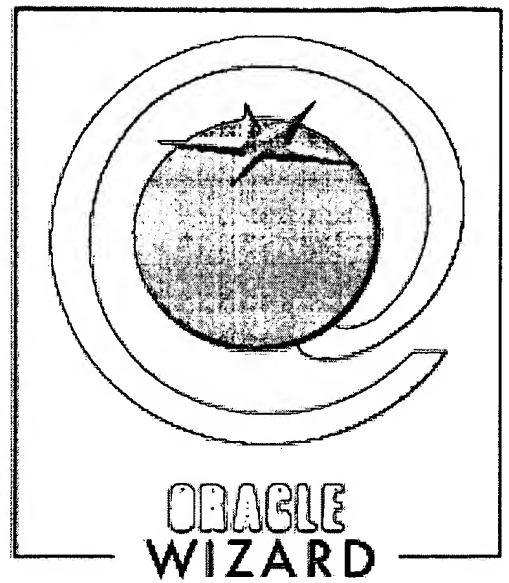


Appendix B



SGR-RJ-17

Introduction

Summary

Configuration data

System Global Area

Sessions

Redo Logs

Cache Hit Ratios

Data files I/O

User I/O

Memory Usage

CPU Usage

Introduction

Based on data collected in the host SGR-RJ-17, from 08/16/2001, at 18:00, to 08/21/2001, at 18:00, the current performance analysis report was elaborated for Oracle instance cmt1.

The data used in this report was obtained from an exclusive collector, developed specially for this end, executing on the target instance with high resolution and low intrusion. This collector obtains data directly from the Oracle instance, without any other libraries or additional tools, with a minimum overhead on the system. The data collected is stored using a binary format, in order to provide persistence. When automatically sent, it is compressed and encrypted, to ensure fast delivery and confidentiality.

The content of this report is based on years of experience in performance analysis and capacity planning. The tool used to generate this report operates in a completely automatic way, without direct human intervention. It uses an extensible inference machine, based on heuristics and rules, and is subject to continuous improvements. Using concepts such as "watermarks" and tolerance, it is possible to determine if a computational resource usage is excessive and if the excess is relevant.

During the monitoring period, the summary configuration of the instance, which has been obtained dynamically, was:

Instance number	1
Instance name	cmt1
Machine name	SGR-RJ-17
Version	8.1.6.0.0
Status	OPEN
Parallel Database	NO
Archive Mode	STOPPED
Database status	ACTIVE
Instance function	PRIMARY_INSTANCE
Startup Time	06-08-2001 16:27:15

Summary

These are the highlights of the monitored period:

The number of connections was low during all of the monitored period.

The buffer cache hit ratio was high during most of the monitored period.

Server CPU usage was low during all of the monitored period.

Configuration data

The table below informs the main configuration parameters for Oracle, their current values, if they may be modified during a session and if they have been modified since installation.

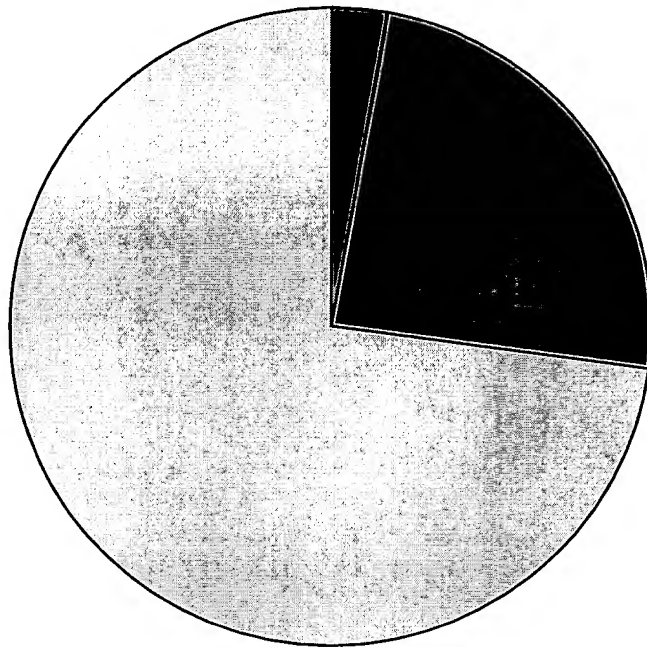
Parameter	Value	Default	Session modifiable	Modified
background_dump_dest	e:\inst00\cmt1\dfs\bkg	FALSE	FALSE	FALSE
buffer_pool_keep		TRUE	FALSE	FALSE
compatible	8.1.0	FALSE	FALSE	FALSE
cpu_count	2	TRUE	FALSE	FALSE
db_block_buffers	67936	FALSE	FALSE	FALSE
db_block_size	8192	FALSE	FALSE	FALSE
db_file_multiblock_read_count	8	FALSE	TRUE	FALSE
db_writer_processes	1	TRUE	FALSE	FALSE
dbwr_io_slaves	0	TRUE	FALSE	FALSE
hash_area_size	131072	TRUE	TRUE	FALSE
java_pool_size	20971520	FALSE	FALSE	FALSE
large_pool_size	614400	FALSE	FALSE	FALSE
lock_sga	FALSE	TRUE	FALSE	FALSE
log_archive_dest		TRUE	FALSE	FALSE
log_archive_max_processes	1	TRUE	FALSE	FALSE
log_archive_start	FALSE	TRUE	FALSE	FALSE
log_buffer	32768	FALSE	FALSE	FALSE
log_checkpoint_interval	10000	FALSE	FALSE	FALSE

Configuration data

Parameter	Value	Default	Session modifiable	Modified
log_checkpoint_timeout	1800	FALSE	FALSE	FALSE
max_dump_file_size	10240	FALSE	TRUE	FALSE
open_cursors	100	FALSE	FALSE	FALSE
optimizer_mode	CHOOSE	TRUE	TRUE	FALSE
pre_page_sga	FALSE	TRUE	FALSE	FALSE
processes	50	FALSE	FALSE	FALSE
shared_pool_reserved_size	9275596	TRUE	FALSE	FALSE
shared_pool_size	185511936	FALSE	FALSE	FALSE
sort_area_retained_size	65536	FALSE	TRUE	FALSE
sort_area_size	65536	FALSE	TRUE	FALSE
user_dump_dest	e:\inst00\cmt1\dbslusr	FALSE	FALSE	FALSE

System Global Area

The graph below shows a summary of the SGA usage.



Total size of the SGA: 728 MB

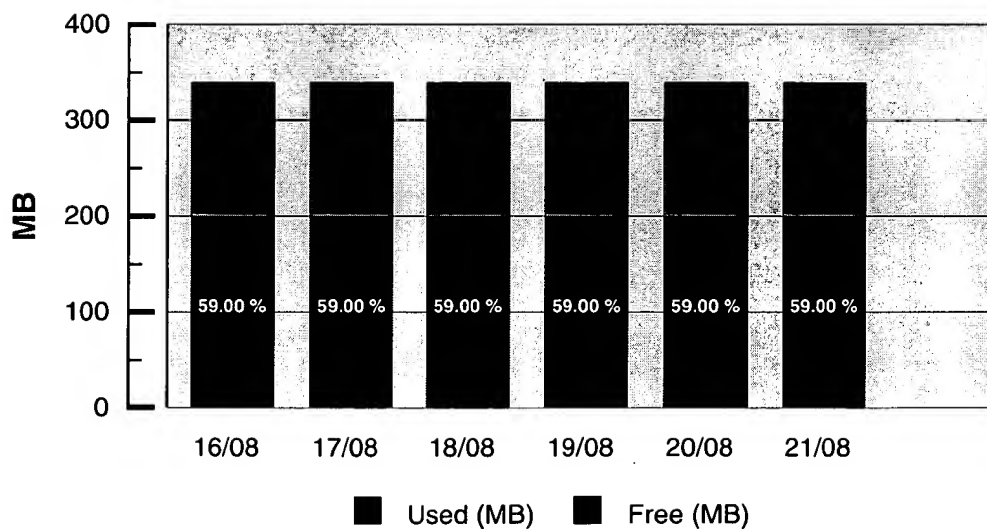
- ☐ Database Buffers: 530 MB (72.88%)
- ☐ Shared Pool: 176 MB (24.29%)
- ☐ Large Pool: 600 KB (0.08%)
- ☐ Java Pool: 20 MB (2.75%)



The table below shows the main configuration parameters for the tablespace. The graph shows that the tablespace usage rate was low all the time.

Tablespace SYSTEM

Initial Extent	16384
Minimum Extent	1
Maximum Extent	505
Next Extent	16384
Percentage increase	50
Largest	146038784
Content	PERMANENT
Status	ONLINE

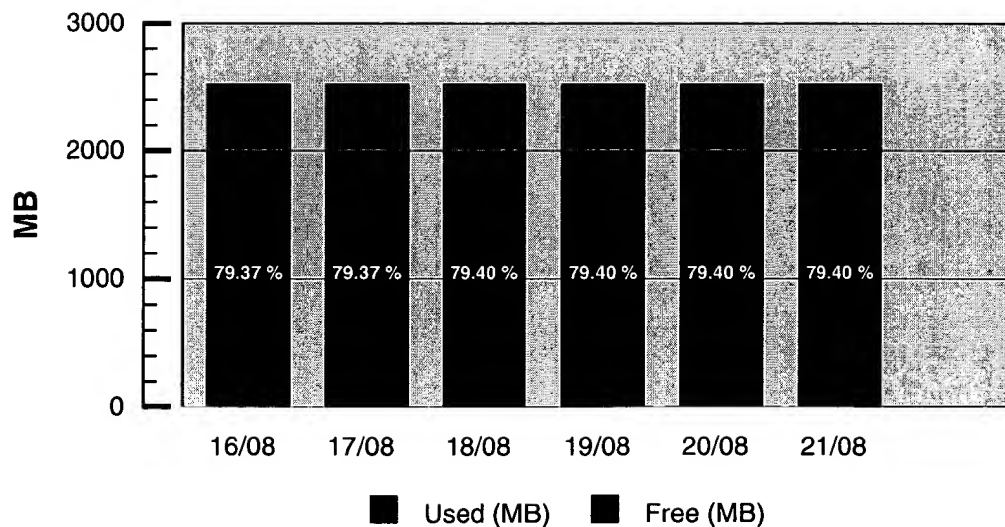
Disk Usage



The table below shows the main configuration parameters for the tablespace. The graph shows that the tablespace usage rate was low all the time.

Tablespace TSCMDA01

Initial Extent	40960
Minimum Extent	1
Maximum Extent	505
Next Extent	40960
Percentage increase	50
Largest	490807296
Content	PERMANENT
Status	ONLINE

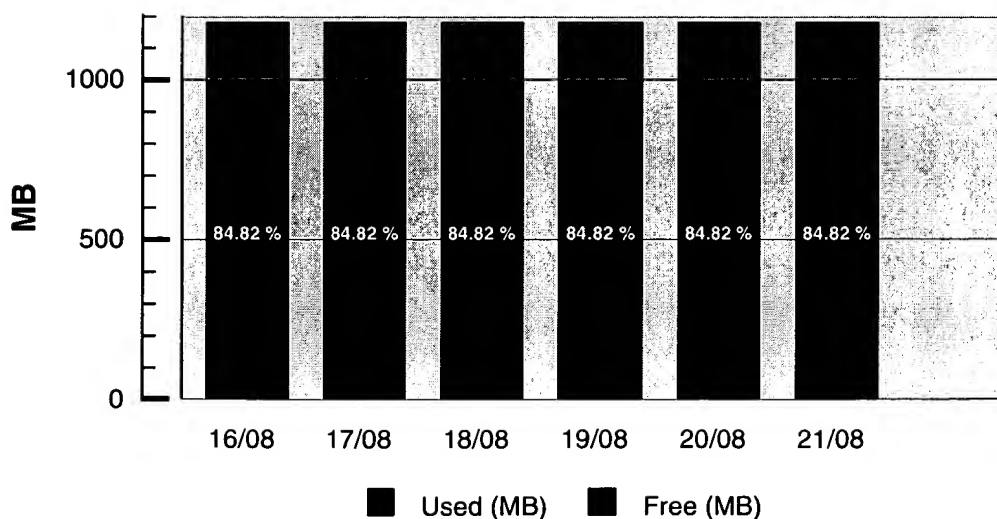
Disk Usage



The table below shows the main configuration parameters for the tablespace. The graph shows that the tablespace usage rate was low all the time.

Tablespace TSCMIX01

Initial Extent	40960
Minimum Extent	1
Maximum Extent	505
Next Extent	40960
Percentage increase	50
Largest	183459840
Content	PERMANENT
Status	ONLINE

Disk Usage

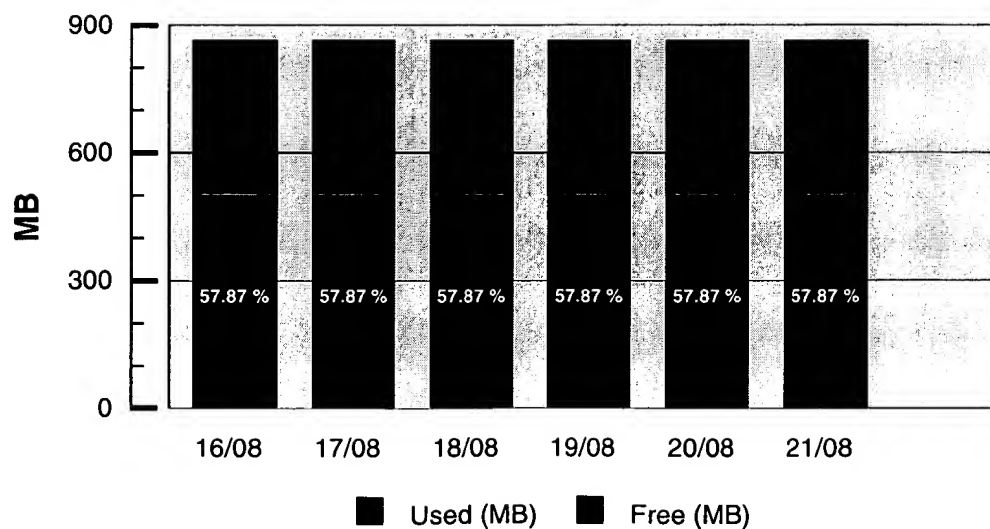


The table below shows the main configuration parameters for the tablespace. The graph shows that the tablespace usage rate was low all the time.

Tablespace TSCMTM01

Initial Extent	40960
Minimum Extent	1
Maximum Extent	0
Next Extent	40960
Percentage increase	50
Largest	382476288
Content	TEMPORARY
Status	ONLINE

Disk Usage

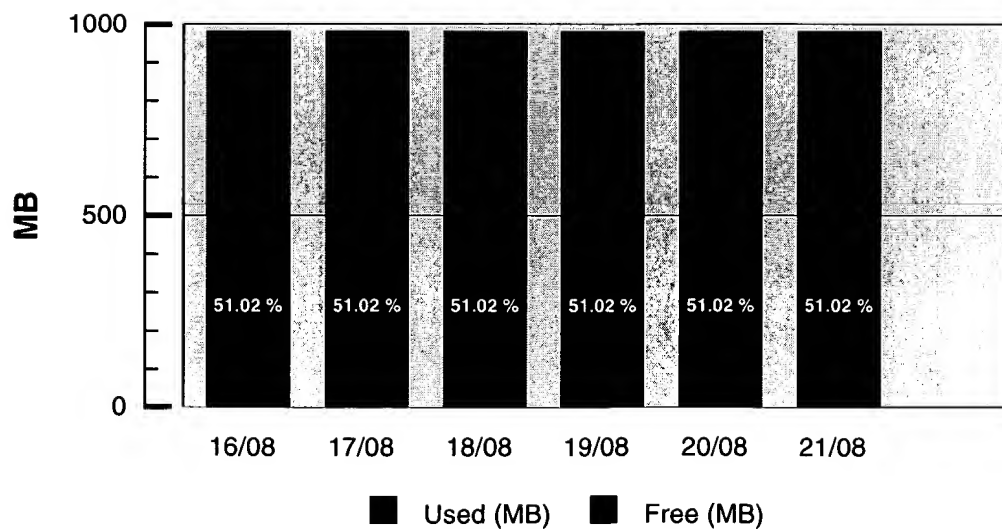




The table below shows the main configuration parameters for the tablespace. The graph shows that the tablespace usage rate was low all the time.

Tablespace TSCMRB01

Initial Extent	40960
Minimum Extent	1
Maximum Extent	505
Next Extent	40960
Percentage increase	50
Largest	503799808
Content	PERMANENT
Status	ONLINE

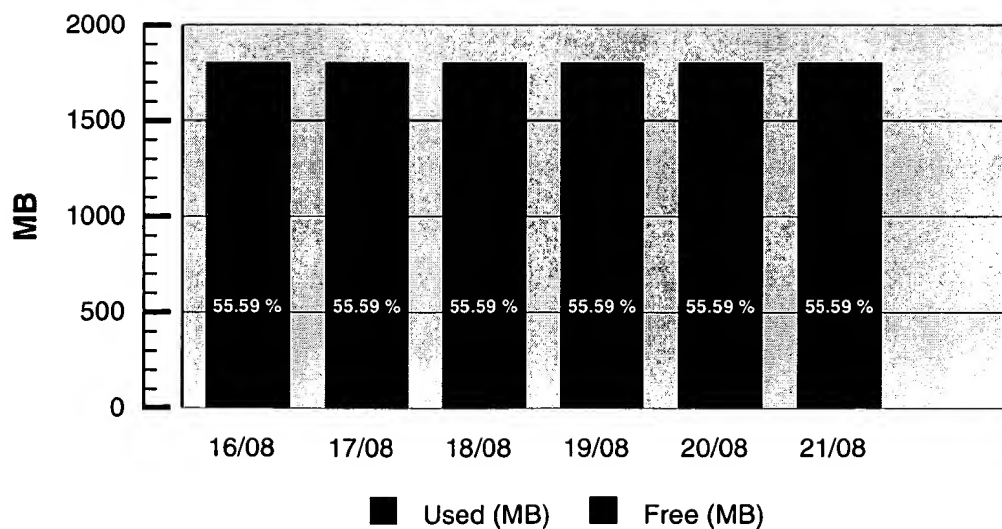
Disk Usage



The table below shows the main configuration parameters for the tablespace. The graph shows that the tablespace usage rate was low all the time.

Tablespace RBSWORK

Initial Extent	40960
Minimum Extent	1
Maximum Extent	505
Next Extent	40960
Percentage increase	50
Largest	838852608
Content	PERMANENT
Status	ONLINE

Disk Usage

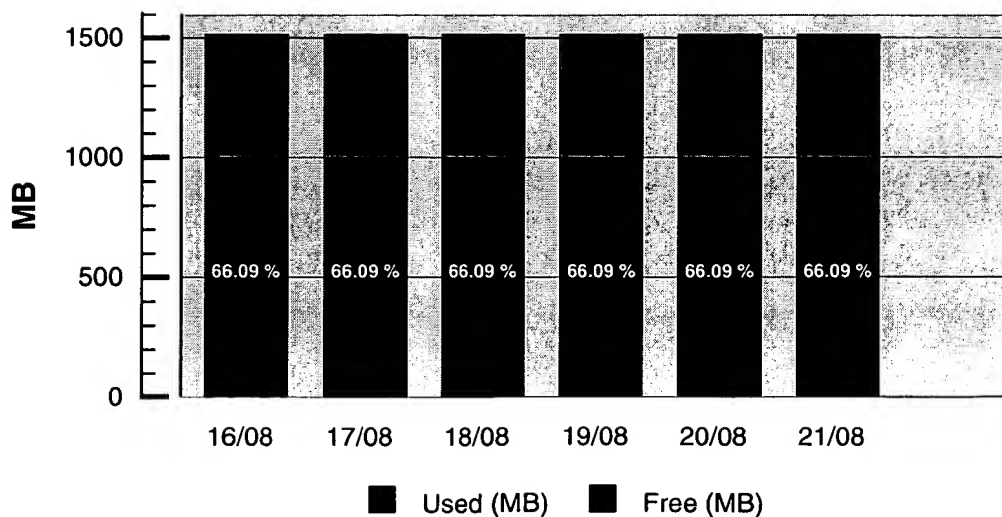


The table below shows the main configuration parameters for the tablespace. The graph shows that the tablespace usage rate was low all the time.

Tablespace TSCMDA02

Initial Extent	1048576
Minimum Extent	1
Maximum Extent	120
Next Extent	106496
Percentage increase	1
Largest	538615808
Content	PERMANENT
Status	ONLINE

Disk Usage

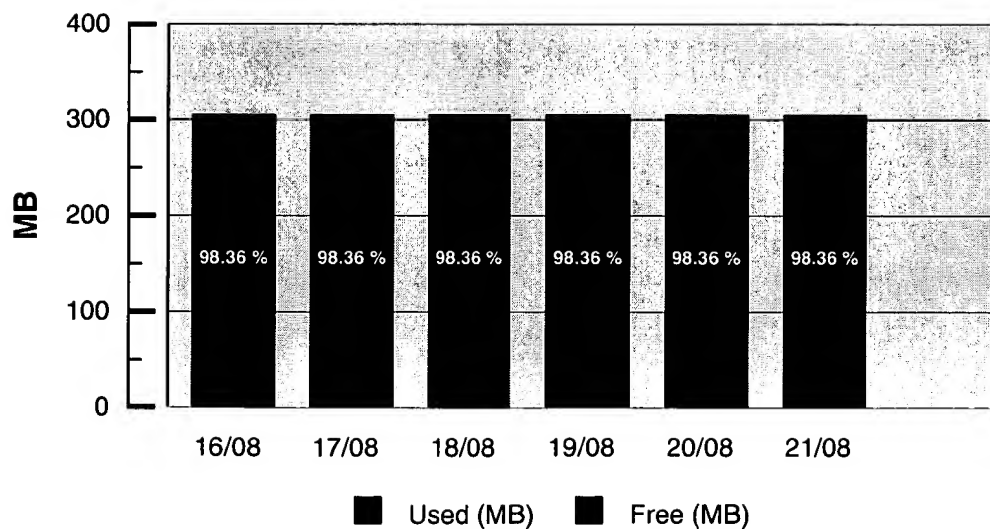




The table below shows the main configuration parameters for the tablespace. the graph shows that the tablespace usage rate was high all the time. You may consider increasing the tablespace.

Tablespace TSCMIX02

Initial Extent	131072
Minimum Extent	1
Maximum Extent	120
Next Extent	131072
Percentage increase	1
Largest	5808128
Content	PERMANENT
Status	ONLINE

Disk Usage

Disk Occupation

Data files

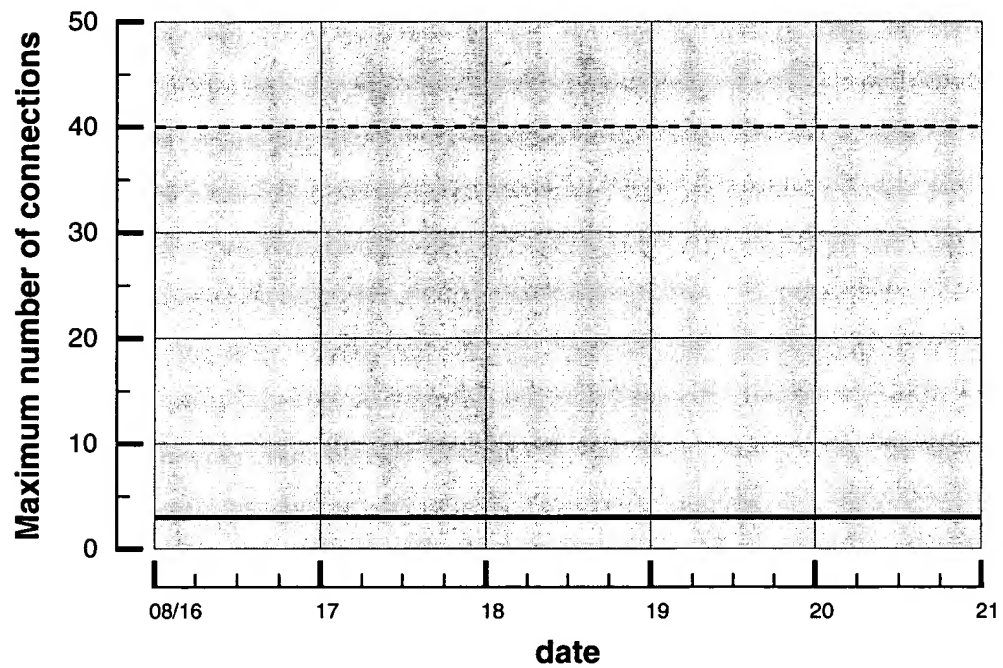
The table below informs the list of datafiles in the databas, with their tablespace, location, creation date, status, activation mode, occupied bytes and free bytes.

Tablespace	Name	Creation\Date	Status	Active	Used	Free
SYSTEM	E:\INST00\CMT1\DBS\DTF\TSCMT1SYS011.DTF	23-07-2001 16:45:20	SYSTEM	READ WRITE	200 MB	139 MB
TSCMDA01	E:\INST00\CMT1\DBS\DTF\TSCMT1DA011.DTF	23-07-2001 17:37:17	ONLINE	READ WRITE	2000 MB	519 MB
TSCMIX01	E:\INST00\CMT1\DBS\DTF\TSCMT1IX011.DTF	23-07-2001 17:37:45	ONLINE	READ WRITE	1000 MB	179 MB
TSCMTM01	E:\INST00\CMT1\DBS\DTF\TSCMT1TM011.DTF	23-07-2001 17:37:58	ONLINE	READ WRITE	500 MB	364 MB
TSCMRB01	E:\INST00\CMT1\DBS\DTF\TSCMT1RB011.DTF	23-07-2001 17:38:12	ONLINE	READ WRITE	500 MB	480 MB
RBSWORK	E:\INST00\CMT1\DBS\DTF\RBSWORK.DTF	23-07-2001 18:25:50	ONLINE	READ WRITE	1000 MB	799 MB
TSCMDA02	E:\INST00\CMT1\DBS\DTF\TSCMT1DA021.DTF	01-08-2001 11:33:36	ONLINE	READ WRITE	1000 MB	513 MB
TSCMIX02	E:\INST00\CMT1\DBS\DTF\TSCMT1IX021.DTF	14-08-2001 13:34:51	ONLINE	READ WRITE	300 MB	5 MB

Sessions



The number of connections to the database did not exceed the limit, and was not a problem.



Redo Logs

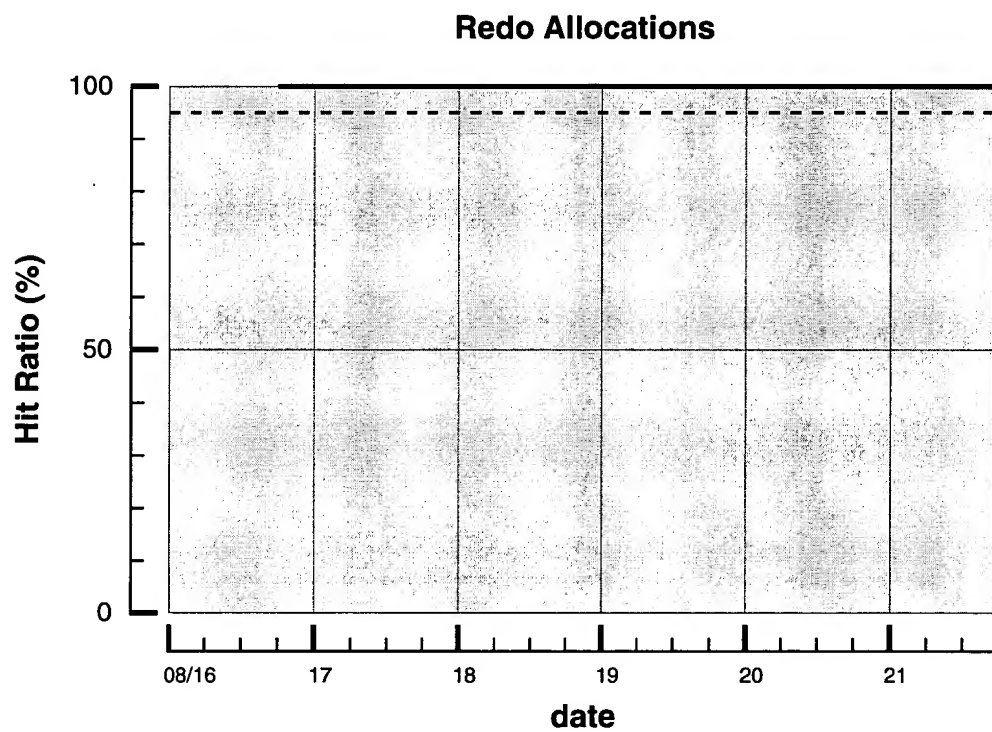
The table below shows the database redo logs, their switch history and their status.

Group#	Sequence#	Bytes	Members	Archived	Status	First Time
1	1231	3145728	1	NO	CURRENT	19-08-2001 17:00:04
2	1229	3145728	1	NO	INACTIVE	18-08-2001 18:30:52
3	1230	3145728	1	NO	INACTIVE	18-08-2001 18:44:55

Hit Ratio



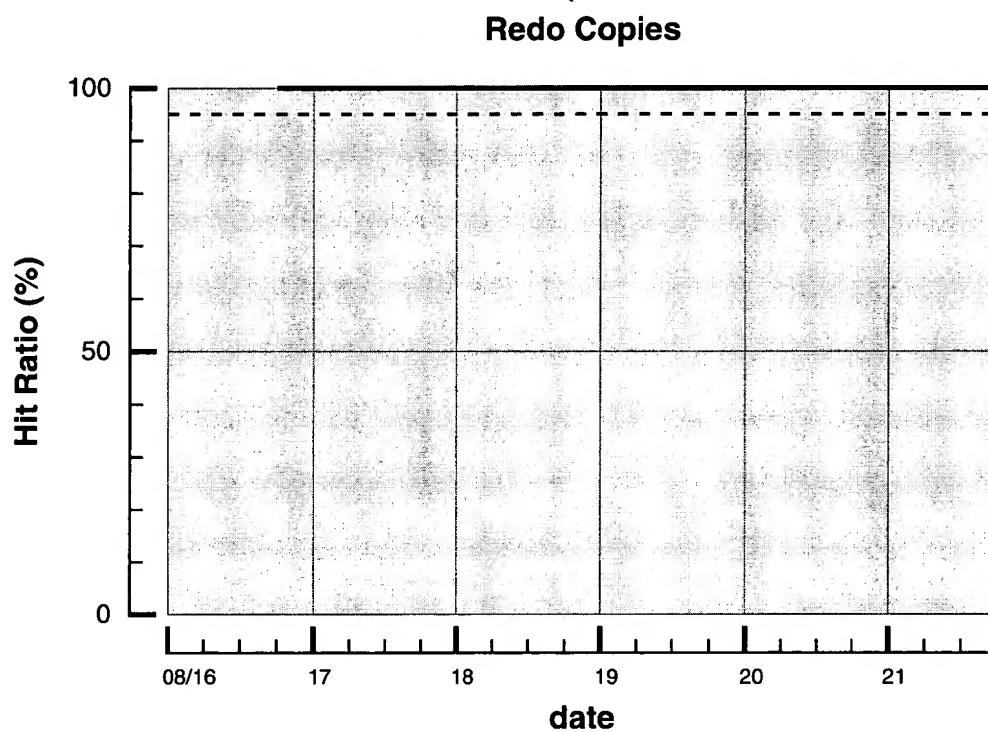
The redo allocation hit ratio remained above the limit for all of the monitored period, so there were no constraints in the access to the redo logs.



Hit Ratio

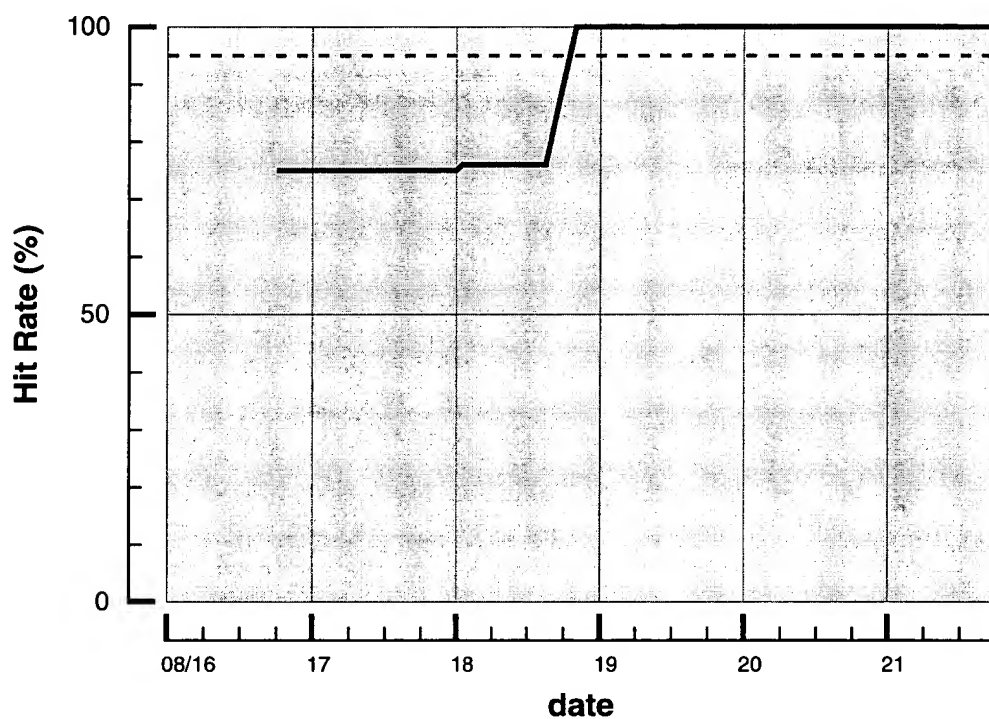


The redo copy hit ratio remained above the limit for all of the monitored period, so access to the redo logs was not a problem.



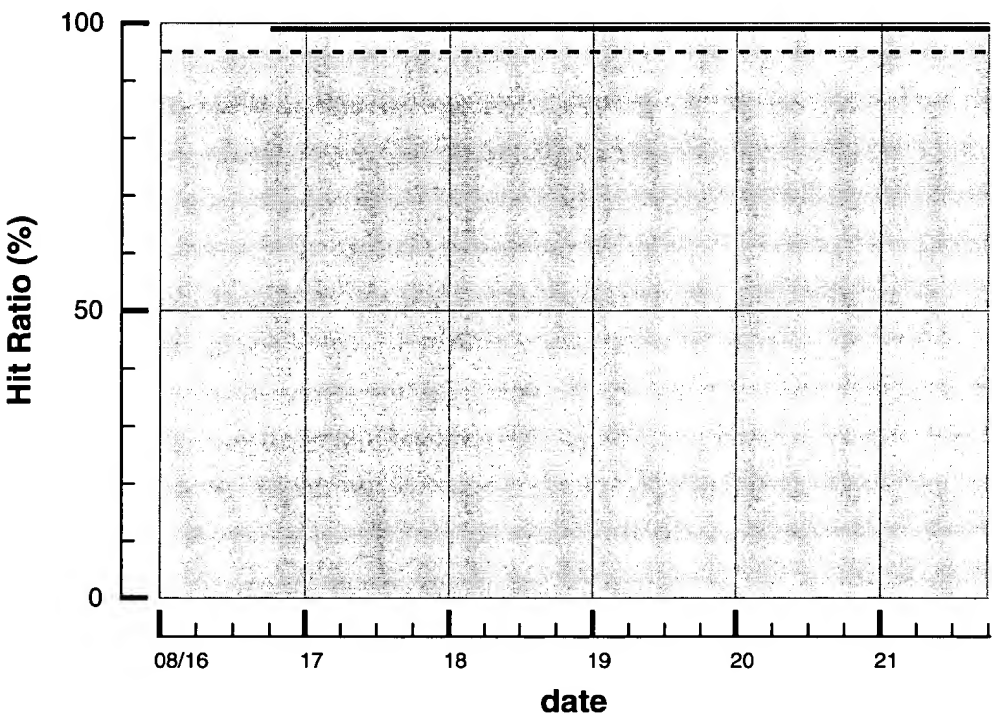


The buffer cache hit ratio was high for most of the monitored period. On some occasions, however, it fell below the limit, indicating that the buffer cache may not be large enough.



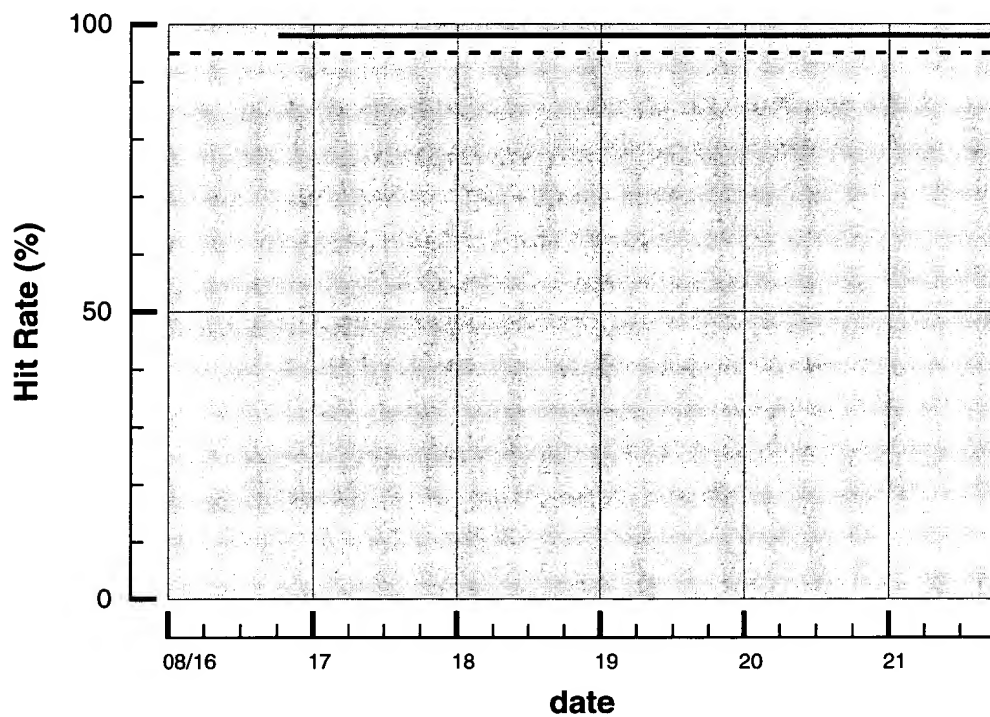


The Library Cache Hit ratio remained above the limit for all of the monitored period, not indicating any performance problems.



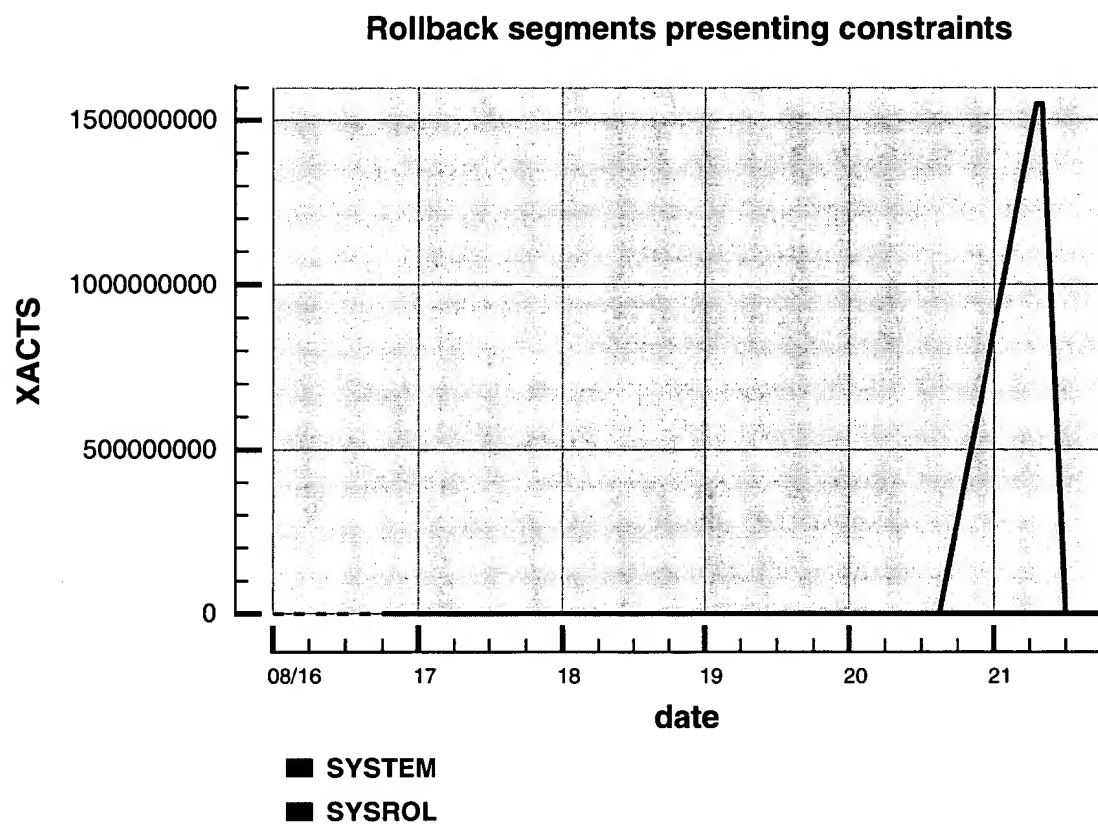


The Dictionary Cache Hit ratio remained above the limit for all of the monitored period, not resulting in a database bottleneck.



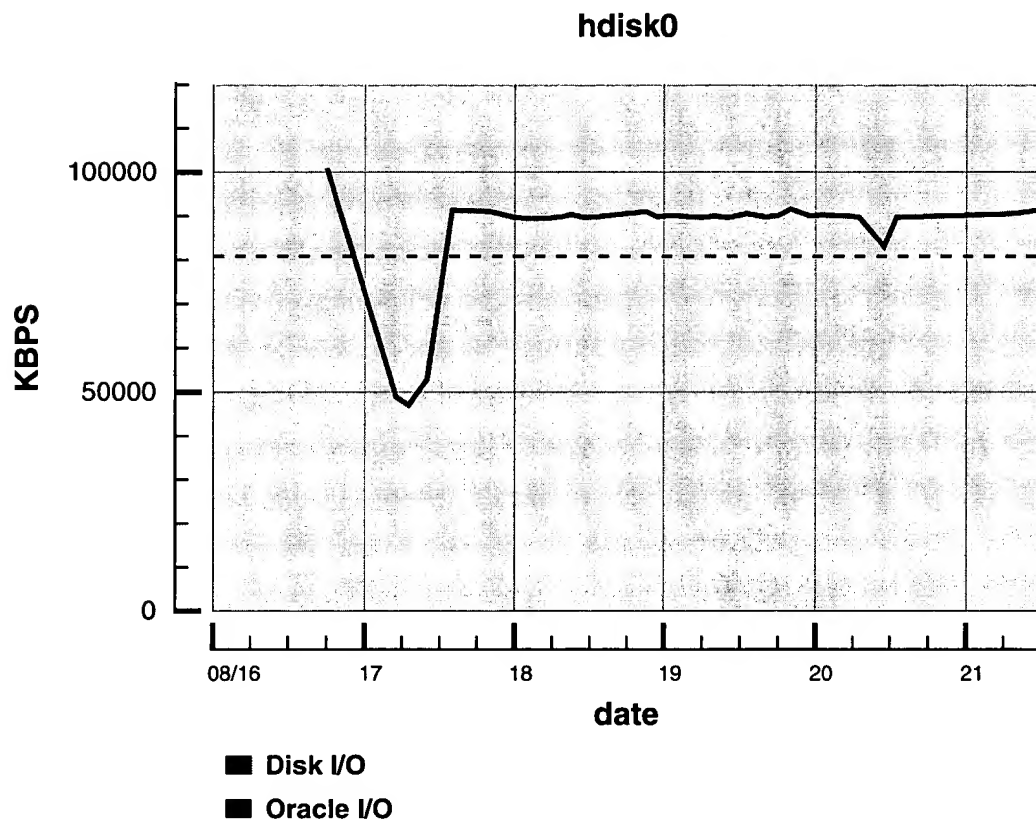
Rollback segments

The following rollback segments presented constraints:



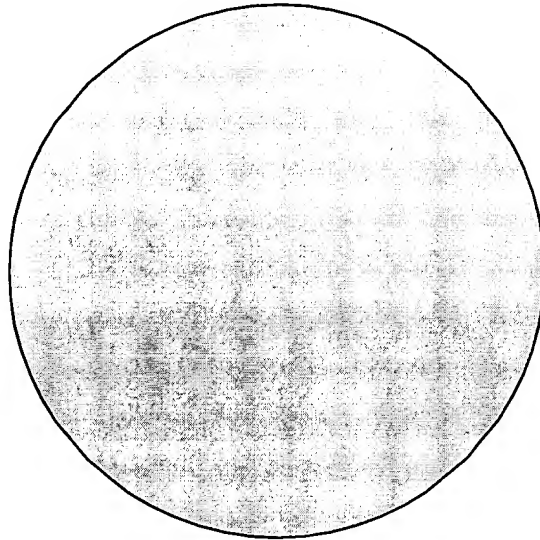
Data files I/O

Below are the total I/O rates for all the disks used by the database, compared to all the data file I/O rates.



Data files I/O

Below are the I/O rates for all the disks occupied by Oracle, with the percentage each one of them represented in the total database I/O.



■ hdisk0 (100.00%)

This section shows the users with the most I/O activity in the database, per day.

Users with the most I/O

User name	System User	Total
ORACLE PROC	SYSTEM	442
SYSTEM	SYSTEM	276
DBSNMP	SYSTEM	10

Users with the most I/O

User name	System User	Total
ORACLE PROC	SYSTEM	4862
SYSTEM	SYSTEM	3036
DBSNMP	SYSTEM	110

Users with the most I/O

User name	System User	Total
ORACLE PROC	SYSTEM	8670
SYSTEM	SYSTEM	5244
DBSNMP	SYSTEM	190

Users with the most I/O

User name	System User	Total
ORACLE PROC	SYSTEM	9680
SYSTEM	SYSTEM	5520
DBSNMP	SYSTEM	200

Users with the most I/O

User name	System User	Total
ORACLE PROC	SYSTEM	5390
SYSTEM	SYSTEM	3036
DBSNMP	SYSTEM	110

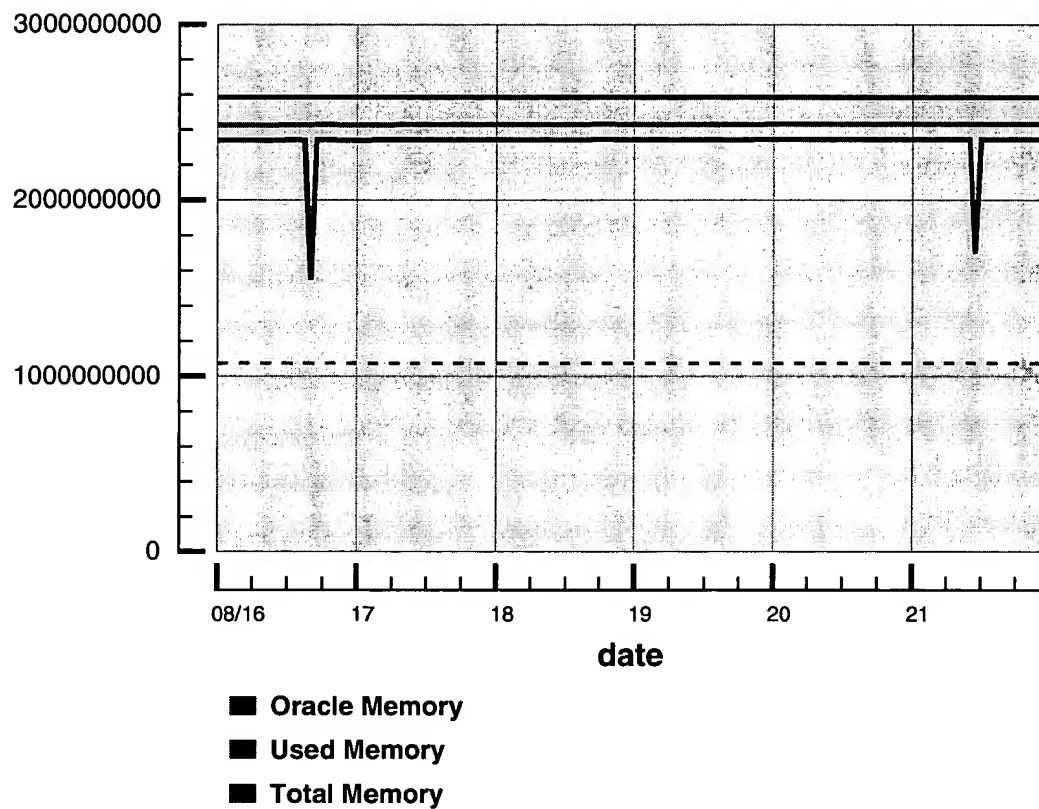
Users with the most I/O

User name	System User	Total
ORACLE PROC	SYSTEM	1960
SYSTEM	SYSTEM	1104
DBSNMP	SYSTEM	40

Memory Usage



Server memory consumption was high during all of the monitored period. Oracle's maximum consumption was 96.5% of it.



CPU Usag



CPU consumption was low throughout the monitored period. Oracle's maximum consumption was 100% of the total.

